

Installation Recommendation SHIELDTAC® blocks

1. Substrate

Suitable substrates are, for example:

- Concrete
- Asphalt
- Screed

Any unevenness must be levelled out before installation.

Soft substrates (e.g. sand) are not suitable unless they are adequately stabilised, as otherwise the blocks cannot rest securely.

If the blocks are positioned in front of a bullet trap, against a wall, on a floor-mounted rail, or in a comparable installation setting, the respective contact or supporting surface must have sufficient load-bearing capacity, be level, and be free of loose debris. Rear boundaries or backing surfaces must be designed to ensure the blocks can be securely positioned and do not shift excessively under load.



Suitable, solid substrate

2. Preparation work

The substrate must be thoroughly swept and cleaned before starting installation.

To ensure the blocks are laid straight, a chalk line can be used.

The blocks should be stored at the installation site to allow them to acclimatise to the ambient temperature.

Working temperature:

- +5 °C and +25 °C

Notes:

- Acclimatisation time: approx. 24 hours



Drawing chalk lines as a guide

3. Installation

Installation generally takes place in front of a bullet trap, against a wall, or as a freestanding structure within a room (e.g., in a tactical training house), provided structural stability is ensured and the calibers used are suitable or certified for this application.

The blocks are laid tightly against one another with no gaps.

The first row is aligned along a wall, perimeter border, or marked line.

The second row is started in a staggered pattern (running bond/T-joint arrangement).

For multi-layer assemblies, the blocks must be stacked with staggered joints between layers.

An arrangement tilted towards the rear is possible and may be appropriate depending on the application. An inclination angle of up to 15° is permissible, provided the structural stability of the assembly is ensured and supported from behind.

Please note the following:

- Arrange blocks in a staggered pattern
- Avoid continuous vertical joints
- Ensure the structural stability of the entire assembly at all times
- Account for dead weight and load transfer in multi-layer assemblies
- Secure freestanding structures against shifting or tipping

**Install the blocks in a staggered pattern****Application-specific installation method**

The orientation of the blocks depends on the respective operating conditions, in particular regarding the calibre, projectile type, projectile energy, and project-specific requirements.

Both **vertical (200mm depth)** and **horizontal (300mm depth)** installation of the blocks are possible. The appropriate configuration shall be determined based on the intended application, the available test reports and finally determined in accordance with the specific operating conditions.

For applications not covered by the available test documentation, suitability must be verified by appropriate and sufficient self-testing.

Depending on the calibre and area of application, additional protection may be required behind the blocks. This can be achieved by means of:

- a second row of blocks, or
- attenuating or protective material compliant with shooting range guidelines.

4. Replacement of the blocks

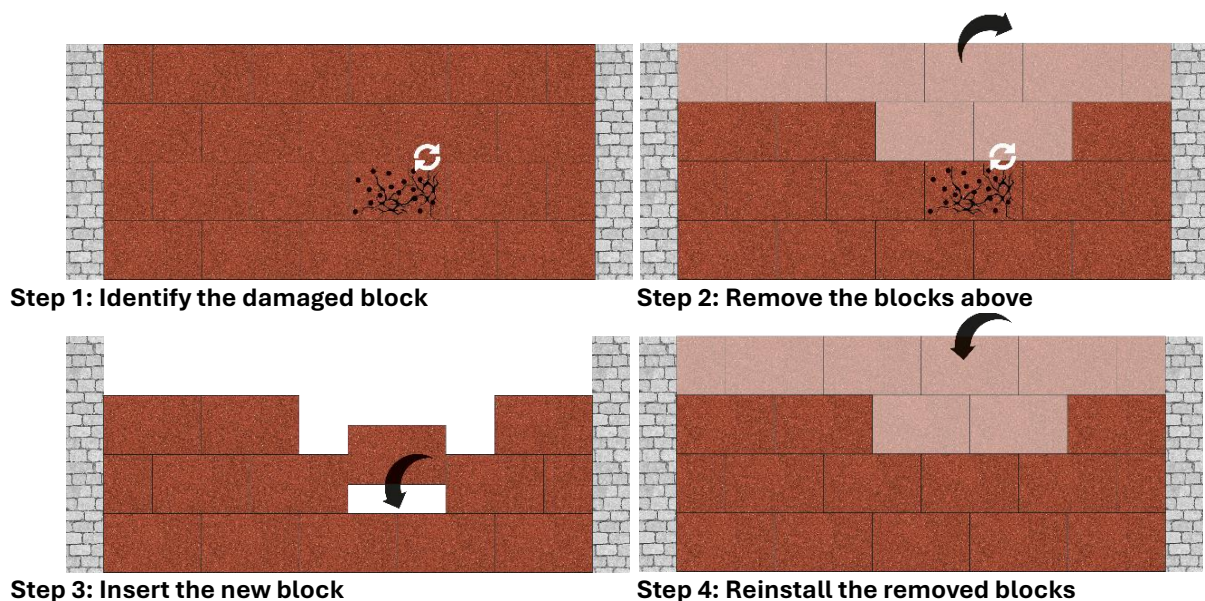
Individual blocks can be replaced as required, particularly in high-use areas (e.g. target zones).

This requires the affected area to be dismantled step-by-step.

The blocks situated above must be removed prior to the replacement and then correctly reassembled in the interlocking pattern afterward.

The used block is removed and can be replaced with a new or less worn block (e.g. from the edges).

Regular repositioning can significantly extend the service life of the entire facility.



5. Important details

Installation shall only be carried out on suitable and properly prepared substrates.

The installation shall be executed in such a way that safe and reliable use during shooting operations is ensured over the long term. Loose or unstable structures shall be avoided.

It is recommended that the installation be carried out under consistent conditions and, where possible, completed within a single working day.

Required tools for the installation



Gloves

Measuring
tape

Band saw



Chalk line



Circular saw

Cutting the blocks

The blocks shall be cut using suitable tools.

Suitable tools include:

- **Circular saw (with coarse-toothed blade and sufficient cutting depth)**
- **Band saw for precise cuts**
- **Chainsaw**

When using saws, ensure that the blocks are securely fixed to prevent vibration and inaccurate cuts.

Cut with a steady feed rate and appropriate cutting speed to prevent material damage and ensure a straight cut.

Storage

- Store in a dry place to prevent moisture absorption and possible mould growth
- Protect from the elements
- Let the material acclimatise at the installation site for approximately 24 hours prior to installation

Material properties

- A characteristic material odour may be noticeable. It will decrease over time and can be reduced by regular ventilation.

Claims:

- Inspect the goods before installation
- If any visible defects are identified, stop installation immediately
- Report any claims immediately and before installation
- If the defect is visible before installation, claims can only be accepted for uninstalled products
- Document all defects with sufficient evidence (e.g. pictures)
- Report any transport damage to the carrier immediately upon delivery

DISCLAIMER:

These recommendations for applications and installation are based on our extensive experience and on current technological practice. Our liability and responsibility in the event of damages shall be limited to the extent defined in our General Terms and Conditions of Business, regardless of the above recommendations or of any statements made or advice given by our sales representatives or applications engineering staff. Ensure that sufficient self-testing is carried out in advance.